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Ambient Air Monitoring Report

***National Industries, Inc. Reclamation Area Site
Park Hills, Missouri***

***Prepared for
The Doe Run Company***

February 2012

40389787



Superfund

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1001 Diamond Ridge Suite 1100
Jefferson City, MO 65109
Phone: (573) 638-5000
Fax: (573) 638-5001

May 11, 2012

Mr. Mark Nations
The Doe Run Company
P.O. Box 1633
Desloge, Missouri 63601

Re: Ambient Air Monitoring Report – National Site

Dear Mr. Nations:

Please find attached the February 2012 “*Ambient Air Monitoring Report*” for The Doe Run Company at the National Industries, Inc. Reclamation Area Sites, located near Park Hills, Missouri.

This report will include the following:

- **Glossary of Terms** – Listing of the abbreviations used for each parameter and unit.
- **Ambient Air Quality Standards** – Lists the maximum allowable concentrations for the measured parameters.
- **TSP, Lead & PM₁₀ Particulate Summaries** – Includes the averages of each monitored parameter, which relates to the federal standards.
- **Particulate and Lead Analysis Spreadsheets**.
- **Lab Results (lead & cadmium)** – Lab reports from Inovatia Laboratories, LLC.
- **Meteorological Data Printouts** – This supplies printouts of each parameter.

Barr Engineering Company offers this report as an independent laboratory. This includes the weighing of filters, obtaining lead and cadmium analysis, compiling the data, and preparing the report. No interpretation of the data or analysis of the results is implied or intended. Should you have any questions regarding this report, please call.

Respectfully,

Richard J. Campbell, PE
Chemical Engineer
Senior Environmental Consultant

c: Kathy Rangen
Jason Gunter
Ty Morris
Kevin Lombardozzi

GLOSSARY OF TERMS

$\mu\text{g}/\text{m}^3$	Micrograms per Cubic Meter
mph	Miles per Hour
Wind Direction	Degrees from True North
TSP	Total Suspended Particulate
PM ₁₀	Particulate Matter - 10 Microns or Less
mmHg	Millimeters of Mercury

NATIONAL AMBIENT AIR QUALITY STANDARDS (NAAQS)

PM ₁₀ – Particulate Matter	24-Hour*	Annual Maximum	150 $\mu\text{g}/\text{m}^3$
Lead	Calendar Quarter	Arithmetic Mean	1.5 $\mu\text{g}/\text{m}^3$
Lead	Rolling 3-Month Average	Arithmetic Mean	0.15 $\mu\text{g}/\text{m}^3$

TSP (Total Suspended Particulate) – There are no Federal Standards that apply solely for TSP.

*This standard must be exceeded more than once a year to constitute a violation.



TSP and Lead Concentration Summary

National
Park Hills, Missouri

2012

Date	TSP Big River #4 ($\mu\text{g}/\text{m}^3$)	TSP Ozark #1 ($\mu\text{g}/\text{m}^3$)	TSP Soccer #2 ($\mu\text{g}/\text{m}^3$)	TSP Water Plant #3 ($\mu\text{g}/\text{m}^3$)	LEAD Big River #4 ($\mu\text{g}/\text{m}^3$)	LEAD Ozark #1 ($\mu\text{g}/\text{m}^3$)	LEAD Soccer #2 ($\mu\text{g}/\text{m}^3$)	LEAD Water Plant #3 ($\mu\text{g}/\text{m}^3$)
2/1/12	17	25	46	17	0.024	0.025	0.129	0.019
2/2/12	32	22	30	23	0.037	0.017	0.033	0.036
2/3/12	6	4	4	5	0.000	0.000	0.000	0.000
2/6/12	9	17	18	13	0.008	0.015	0.024	0.015
2/7/12	13	14	18	16	0.012	0.007	0.008	0.014
2/8/12	7	16	16	9	0.000	0.013	0.033	0.006
2/9/12	8	12	11	10	0.007	0.026	0.013	0.008
2/10/12	11	18	17	11	0.009	0.008	0.027	0.010
2/13/12	3	6	5	5	0.013	0.012	0.012	0.009
2/14/12	8	22	18	10	0.011	0.013	0.033	0.013
2/15/12	5	8	9	4	0.060	0.000	0.000	0.000
2/16/12	22	35	32	27	0.008	0.022	0.031	0.016
2/17/12	22	21	26	18	0.019	0.017	0.041	0.015
2/20/12	10	16	14	11	0.000	0.012	0.015	0.006
2/21/12	9	26	23	14	0.013	0.032	0.035	0.020
2/22/12	23	36	38	29	0.008	0.030	0.041	0.026
2/23/12	35	32	36	34	0.034	0.022	0.042	0.129
2/24/12	26	17	15	23	0.038	0.012	0.018	0.068
2/27/12	31	26	33	29	0.019	0.010	0.031	0.037
2/28/12	73	75	81	83	0.013	0.016	0.027	0.049
2/29/12	38	34	31	33	0.017	0.040	0.021	0.022
Monthly Average	19	23	25	20	0.017	0.017	0.029	0.025
Jan 2012					0.018	0.021	0.019	0.016
Dec 2011					0.008	0.010	0.018	0.010
Rolling 3-month Average					0.01	0.02	0.02	0.02
					3-month Average Lead NAAQS $\mu\text{g}/\text{m}^3$			
					0.15			

Please see the particulate analysis sheets for explanations of missing or invalid data.

Note: A summary of the Big River #4 sampler data is also included, because it was part of the QA plan.



Particulate Summary

National
Park Hills, Missouri

2012

Date	PM ₁₀ Big River #4 ($\mu\text{g}/\text{m}^3$)	PM ₁₀ Ozark #1 ($\mu\text{g}/\text{m}^3$)	PM ₁₀ Soccer #2 ($\mu\text{g}/\text{m}^3$)	PM ₁₀ Water Plant #3 ($\mu\text{g}/\text{m}^3$)	PM ₁₀ NAAQS ($\mu\text{g}/\text{m}^3$)
3-Feb	10	7	8	6	150
6-Feb	11	13	12	12	150
9-Feb	8	10	9	8	150
12-Feb	11	7	7	3	150
15-Feb	5	5	5	4	150
18-Feb	16	12	12	14	150
21-Feb	4	6	6	4	150
24-Feb	16	9	7	11	150
27-Feb	14	13	14	12	150
Monthly Average	11	9	9	8	

Please see the particulate analysis sheets for explanations of missing or invalid data.

Note: A summary of the Big River #4 sampler data is also included, because it was part of the QA plan.

Particulate and Lead Analysis



TSP and Lead Analysis

The Doe Run Company

SAMPLER ID P4557

Big River Site #4- Primary

Sample Date 2012	Filter ID	TSP Filter Net Wt. g	Lead Total Wt. μg	T _{av} C	P _{av} mmHg	P _t mmHg	Ratio P _t /P _a	Q _a m ³ /min	Q _{std} m ³ /min	Elapsed Time hr	Sample Volume V _{std} m ³	Mass Concentrations TSP μg/m ³	Lead μg/m ³
2/1/2012	8462321	0.0311	42	11	746.8	34.5	0.954	1.223	1.260	23.70	1791	17	0.024
2/2/2012	8462312	0.0572	67	8	751.0	34.0	0.955	1.217	1.277	23.66	1813	32	0.037
2/3/2012	8462303	0.0112	< 10	8	750.0	34.0	0.955	1.217	1.275	23.77	1819	6	0.000
2/6/2012	8545394	0.0169	14	2	750.9	33.3	0.956	1.208	1.292	23.59	1829	9	0.008
2/7/2012	8545384	0.0244	22	3	751.2	33.4	0.956	1.209	1.291	23.70	1836	13	0.012
2/8/2012	8545375	0.0133	< 10	1	754.6	33.1	0.956	1.205	1.303	23.76	1858	7	0.000
2/9/2012	8545365	0.0150	14	1	752.3	33.2	0.956	1.206	1.298	23.72	1847	8	0.007
2/10/2012	8545357	0.0205	17	1	747.6	33.1	0.956	1.205	1.290	23.76	1840	11	0.009
2/13/2012	8545347	0.0064	24	-1	746.7	32.9	0.956	1.201	1.295	23.70	1841	3	0.013
2/14/2012	8545338	0.0145	20	3	743.5	33.4	0.955	1.209	1.276	23.68	1813	8	0.011
2/15/2012	8545329	0.0085	110	5	745.1	33.8	0.955	1.213	1.272	23.80	1817	5	0.060
2/16/2012	8545319	0.0404	14	6	748.6	33.8	0.955	1.214	1.278	23.74	1821	22	0.008
2/17/2012	8545309	0.0395	35	4	748.8	33.6	0.955	1.211	1.283	23.75	1829	22	0.019
2/20/2012	8546200	0.0189	< 10	3	746.9	33.5	0.955	1.209	1.282	23.69	1823	10	0.000
2/21/2012	8546190	0.0162	24	8	741.0	34.1	0.954	1.217	1.258	23.75	1793	9	0.013
2/22/2012	8546182	0.0406	14	8	734.8	34.1	0.954	1.217	1.247	23.74	1776	23	0.008
2/23/2012	8546171	0.0608	59	13	729.5	34.7	0.952	1.225	1.225	23.58	1733	35	0.034
2/24/2012	8546163	0.0467	70	4	743.2	33.6	0.955	1.211	1.272	23.78	1814	26	0.038
2/27/2012	8546152	0.0562	34	9	753.3	34.2	0.955	1.220	1.277	23.71	1817	31	0.019
2/28/2012	8546143	0.1298	23	10	747.9	34.3	0.954	1.221	1.265	23.57	1789	73	0.013
2/29/2012	8546134	0.0661	29	15	738.5	34.9	0.953	1.229	1.235	23.65	1752	38	0.017

Data Captured	TSP	Lead
Valid Samples:	21	21
Scheduled Samples:	21	21
Percent Data Captured:	100%	100%

Monthly Average:	19	0.017
Standard Deviation:	16	0.015
Maximum:	73	0.060
Minimum:	3	0.000

NOTES

DEFINITIONS and CALCULATIONS

T_{av} = average temperature in degrees Celsius

P_{av} = average station pressure in millimeters of mercury

P_t = ((Temp in °Kelvin * Temp Slope)+Temp Int.)*1.868

P_t = ((Temp in °Kelvin * 0.0664)+(-0.4213))*1.868

P_t/P_a = pressure ratio of P_t and P_{av} = 1 - P_t/P_{av}

Q_a = look up table volumetric flow rate

Q_{std} = total sample volumetric flow rate corrected to standard conditions

V_{std} = total sample volume corrected to standard conditions

TSP = mass concentration in μg/std m³

Lead = mass concentration in μg/std m³



TSP and Lead Analysis

The Doe Run Company

SAMPLER ID P2939

National Site #1 Ozark Insulation

Sample Date 2012	Filter ID	TSP Filter Net Wt. g	Lead Total Wt. μg	T _{av} C	P _{av} mmHg	P _f mmHg	Ratio P _f /P _a	Q _a m ³ /min	Q _{std} m ³ /min	Elapsed Time hr	Sample Volume V _{std} m ³	Mass Concentrations TSP μg/m ³	Lead μg/m ³
2/1/2012	8462316	0.0459	45	11	746.8	34.5	0.954	1.219	1.256	23.95	1804	25	0.025
2/2/2012	8462307	0.0388	30	8	751.0	34.0	0.955	1.213	1.273	23.30	1779	22	0.017
2/3/2012	8545398	0.0074	< 10	8	750.0	34.0	0.955	1.213	1.271	23.89	1822	4	0.000
2/6/2012	8545389	0.0313	28	2	750.9	33.3	0.956	1.204	1.288	23.93	1849	17	0.015
2/7/2012	8545379	0.0254	13	3	751.2	33.4	0.956	1.205	1.287	23.79	1837	14	0.007
2/8/2012	8545370	0.0298	23	1	754.6	33.1	0.956	1.201	1.299	23.96	1867	16	0.013
2/9/2012	8545360	0.0212	47	1	752.3	33.2	0.956	1.202	1.294	23.48	1823	12	0.026
2/10/2012	8545358	0.0332	15	1	747.6	33.1	0.956	1.201	1.286	23.98	1850	18	0.008
2/13/2012	8545349	0.0113	22	-1	746.7	32.9	0.956	1.197	1.290	23.95	1854	6	0.012
2/14/2012	8545339	0.0391	24	3	743.5	33.4	0.955	1.205	1.272	23.74	1812	22	0.013
2/15/2012	8545330	0.0136	< 10	5	745.1	33.8	0.955	1.210	1.268	23.75	1807	8	0.000
2/16/2012	8545321	0.0616	39	6	748.6	33.8	0.955	1.210	1.274	23.29	1781	35	0.022
2/17/2012	8545304	0.0388	32	4	748.8	33.6	0.955	1.207	1.279	23.69	1818	21	0.017
2/20/2012	8545302	0.0296	22	3	746.9	33.5	0.955	1.205	1.278	23.70	1817	16	0.012
2/21/2012	8546185	0.0461	58	8	741.0	34.1	0.954	1.213	1.254	23.71	1784	26	0.032
2/22/2012	8546183	0.0641	54	8	734.8	34.1	0.954	1.213	1.243	23.74	1770	36	0.030
2/23/2012	8546166	0.0547	39	13	729.5	34.7	0.952	1.221	1.221	23.59	1728	32	0.022
2/24/2012	8546164	0.0312	22	4	743.2	33.6	0.955	1.208	1.268	23.71	1803	17	0.012
2/27/2012	8546147	0.0473	18	9	753.3	34.2	0.955	1.216	1.273	23.73	1812	26	0.010
2/28/2012	8546138	0.1337	28	10	747.9	34.3	0.954	1.217	1.261	23.63	1788	75	0.016
2/29/2012	8546136	0.0575	69	15	738.5	34.9	0.953	1.225	1.231	23.16	1710	34	0.040

Data Captured	TSP	Lead
Valid Samples:	21	21
Scheduled Samples:	21	21
Percent Data Captured:	100%	100%

Monthly Average:	23	0.017
Standard Deviation:	15	0.010
Maximum:	75	0.040
Minimum:	4	0.000

NOTES

DEFINITIONS and CALCULATIONS

T_{av} = average temperature in degrees Celsius

P_{av} = average station pressure in millimeters of mercury

P_f = ((Temp in °Kelvin * Temp Slope)+Temp Int.)*1.868

P_a = ((Temp in °Kelvin * 0.0664)+(-0.4213))*1.868

P_f/P_a = pressure ratio of P_f and P_{av} = 1 - P_f/P_{av}

Q_a = look up table volumetric flow rate

Q_{std} = total sample volumetric flow rate corrected to standard conditions

V_{std} = total sample volume corrected to standard conditions

TSP = mass concentration in μg/std m³

Lead = mass concentration in μg/std m³



TSP and Lead Analysis

The Doe Run Company

SAMPLER ID P4474

National Site #2 - Soccer Field

Sample Date 2012	Filter ID	TSP Filter Net Wt. g	Lead Total Wt. μg	T_{av} C	P_{av} mmHg	P_f mmHg	Ratio P_f/P_a	Q_a m^3/min	Q_{std} m^3/min	Elapsed Time hr	Sample Volume V_{std} m^3	Mass Concentrations TSP $\mu\text{g}/\text{m}^3$	Lead $\mu\text{g}/\text{m}^3$
2/1/2012	8462317	0.0822	228	11	746.8	34.5	0.954	1.205	1.241	23.75	1768	46	0.129
2/2/2012	8462308	0.0529	58	8	751.0	34.0	0.955	1.199	1.258	23.27	1756	30	0.033
2/3/2012	8545399	0.0078	< 10	8	750.0	34.0	0.955	1.199	1.256	23.48	1770	4	0.000
2/6/2012	8545390	0.0318	44	2	750.9	33.3	0.956	1.191	1.273	23.59	1802	18	0.024
2/7/2012	8545380	0.0332	15	3	751.2	33.4	0.956	1.191	1.273	23.71	1810	18	0.008
2/8/2012	8545371	0.0297	60	1	754.6	33.1	0.956	1.188	1.284	23.75	1830	16	0.033
2/9/2012	8545361	0.0202	23	1	752.3	33.2	0.956	1.188	1.279	23.53	1806	11	0.013
2/10/2012	8545359	0.0315	48	1	747.6	33.1	0.956	1.188	1.272	23.72	1810	17	0.027
2/13/2012	8545350	0.0091	21	-1	746.7	32.9	0.956	1.184	1.276	23.60	1806	5	0.012
2/14/2012	8545340	0.0320	59	3	743.5	33.4	0.955	1.191	1.258	23.61	1782	18	0.033
2/15/2012	8545331	0.0160	< 10	5	745.1	33.8	0.955	1.196	1.254	23.62	1777	9	0.000
2/16/2012	8545322	0.0558	54	6	748.6	33.8	0.955	1.196	1.260	23.31	1762	32	0.031
2/17/2012	8545305	0.0470	73	4	748.8	33.6	0.955	1.193	1.264	23.61	1791	26	0.041
2/20/2012	8545303	0.0254	26	3	746.9	33.5	0.955	1.192	1.264	23.58	1788	14	0.015
2/21/2012	8546186	0.0406	61	8	741.0	34.1	0.954	1.199	1.240	23.58	1754	23	0.035
2/22/2012	8546184	0.0662	71	8	734.8	34.1	0.954	1.199	1.229	23.58	1738	38	0.041
2/23/2012	8546167	0.0620	72	13	729.5	34.7	0.952	1.206	1.206	23.63	1710	36	0.042
2/24/2012	8546165	0.0268	31	4	743.2	33.6	0.955	1.194	1.253	23.58	1773	15	0.018
2/27/2012	8546148	0.0581	55	9	753.3	34.2	0.955	1.202	1.258	23.63	1784	33	0.031
2/28/2012	8546139	0.1429	48	10	747.9	34.3	0.954	1.203	1.247	23.68	1771	81	0.027
2/29/2012	8546137	0.0519	36	15	738.5	34.9	0.953	1.211	1.217	23.22	1695	31	0.021

Data Captured	TSP	Lead
Valid Samples:	21	21
Scheduled Samples:	21	21
Percent Data Captured:	100%	100%

Monthly Average:	25	0.029
Standard Deviation:	17	0.026
Maximum:	81	0.129
Minimum:	4	0.000

NOTES

DEFINITIONS and CALCULATIONS

T_{av} = average temperature in degrees Celsius

P_{av} = average station pressure in millimeters of mercury

$P_f = (((\text{Temp in } ^\circ\text{Kelvin} * \text{Temp Slope}) + \text{Temp Int.}) * 1.868$

$P_f = ((\text{Temp in } ^\circ\text{Kelvin} * 0.0664) + (-0.4213)) * 1.868$

$P_f/P_a = \text{pressure ratio of } P_f \text{ and } P_{av} = 1 - P_f/P_{av}$

Q_a = look up table volumetric flow rate

Q_{std} = total sample volumetric flow rate corrected to standard conditions

V_{std} = total sample volume corrected to standard conditions

TSP = mass concentration in $\mu\text{g}/\text{std m}^3$

Lead = mass concentration in $\mu\text{g}/\text{std m}^3$



TSP and Lead Analysis

The Doe Run Company

SAMPLER ID P4475

National Site Water Plant #3

Sample Date	Filter ID	TSP Filter Net Wt. g	Lead Total Wt. μg	T_{av} C	P_{av} mmHg	P_f mmHg	Ratio P_f/P_a	Q_a m^3/min	Q_{std} m^3/min	Elapsed Time hr	Sample Volume V_{std} m^3	Mass Concentrations TSP $\mu\text{g}/\text{m}^3$	Lead $\mu\text{g}/\text{m}^3$
2/1/2012	8462319	0.0300	34	11	746.8	34.5	0.954	1.210	1.246	23.76	1776	17	0.019
2/2/2012	8462310	0.0419	64	8	751.0	34.0	0.955	1.204	1.263	23.74	1799	23	0.036
2/3/2012	8462301	0.0084	< 10	8	750.0	34.0	0.955	1.204	1.261	23.76	1798	5	0.000
2/6/2012	8545392	0.0233	27	2	750.9	33.3	0.956	1.195	1.278	23.73	1819	13	0.015
2/7/2012	8545382	0.0290	25	3	751.2	33.4	0.956	1.195	1.277	23.64	1811	16	0.014
2/8/2012	8545373	0.0165	12	1	754.6	33.1	0.956	1.192	1.289	23.67	1830	9	0.006
2/9/2012	8545363	0.0178	14	1	752.3	33.2	0.956	1.192	1.284	23.73	1828	10	0.008
2/10/2012	8545355	0.0191	18	1	747.6	33.1	0.956	1.192	1.276	23.78	1821	11	0.010
2/13/2012	8545345	0.0087	16	-1	746.7	32.9	0.956	1.188	1.280	23.74	1823	5	0.009
2/14/2012	8545336	0.0176	23	3	743.5	33.4	0.955	1.195	1.262	23.70	1795	10	0.013
2/15/2012	8545327	0.0068	< 10	5	745.1	33.8	0.955	1.200	1.258	23.68	1788	4	0.000
2/16/2012	8545317	0.0484	28	6	748.6	33.8	0.955	1.200	1.264	23.76	1802	27	0.016
2/17/2012	8545307	0.0332	27	4	748.8	33.6	0.955	1.198	1.269	23.76	1809	18	0.015
2/20/2012	8546198	0.0205	10	3	746.9	33.5	0.955	1.196	1.268	23.77	1808	11	0.006
2/21/2012	8546188	0.0248	36	8	741.0	34.1	0.954	1.204	1.244	23.72	1771	14	0.020
2/22/2012	8546180	0.0500	46	8	734.8	34.1	0.954	1.203	1.233	23.64	1749	29	0.026
2/23/2012	8546169	0.0582	222	13	729.5	34.7	0.952	1.211	1.211	23.70	1722	34	0.129
2/24/2012	8546161	0.0404	122	4	743.2	33.6	0.955	1.198	1.258	23.72	1790	23	0.068
2/27/2012	8546150	0.0512	66	9	753.3	34.2	0.955	1.207	1.263	23.70	1796	29	0.037
2/28/2012	8546141	0.1476	87	10	747.9	34.3	0.954	1.208	1.251	23.68	1778	83	0.049
2/29/2012	8546132	0.0569	39	15	738.5	34.9	0.953	1.216	1.221	23.69	1736	33	0.022

Data Captured	TSP	Lead
Valid Samples:	21	21
Scheduled Samples:	21	21
Percent Data Captured:	100%	100%

Monthly Average:	20	0.025
Standard Deviation:	17	0.029
Maximum:	83	0.129
Minimum:	4	0.000

NOTES

Filter Blank QA	Nominal Airflow						Tolerance $\pm \mu\text{m}^3$				
2/29/2012	8546127	-0.0020	25	760.0	36.2	0.952	1.236	1.236	24.00	1780	-1.1

DEFINITIONS and CALCULATIONS

T_{av} = average temperature in degrees Celcius

P_{av} = average station pressure in millimeters of mercury

$P_f = (((\text{Temp in } ^\circ\text{Kelvin} * \text{Temp Slope}) + \text{Temp Int.}) * 1.868$

$P_f = ((\text{Temp in } ^\circ\text{Kelvin} * 0.0664) + (-0.4213)) * 1.868$

P_f/P_a = pressure ratio of P_f and P_{av} = $1 - P_f/P_{av}$

Q_a = look up table volumetric flow rate

Q_{std} = total sample volumetric flow rate corrected to standard conditions

V_{std} = total sample volume corrected to standard conditions

TSP = mass concentration in $\mu\text{g}/\text{std m}^3$

Lead = mass concentration in $\mu\text{g}/\text{std m}^3$



TSP and Lead Analysis

The Doe Run Company

SAMPLER ID P6609

Big River Site #4 - QA

Sample Date	Filter ID	TSP Filter Net Wt. g	Lead Total Wt. μg	T_{av} C	P_{av} mmHg	P_f mmHg	Ratio P_o/P_a	Q_a m^3/min	Q_{std} m^3/min	Elapsed Time hr	Sample Volume V_{std} m 3	Mass Concentrations TSP $\mu\text{g}/\text{m}^3$	Lead $\mu\text{g}/\text{m}^3$
2/2/2012	8462322	0.0573	70	8	751.0	34.0	0.955	1.209	1.268	23.93	1820	31	0.038
2/7/2012	8545385	0.0259	23	3	751.2	33.4	0.956	1.200	1.282	23.89	1838	14	0.012
2/9/2012	8545366	0.0140	14	1	752.3	33.2	0.956	1.197	1.289	23.96	1853	8	0.008
2/14/2012	8545348	0.0133	19	3	743.5	33.4	0.955	1.200	1.267	23.88	1816	7	0.011
2/16/2012	8545320	0.0403	15	6	748.6	33.8	0.955	1.205	1.269	23.91	1821	22	0.008
2/21/2012	8545301	0.0163	26	8	741.0	34.1	0.954	1.209	1.249	23.98	1798	9	0.015
2/23/2012	8546172	0.0549	52	13	729.5	34.7	0.952	1.216	1.216	23.58	1720	32	0.030
2/28/2012	8546153	0.1203	26	10	747.9	34.3	0.954	1.213	1.256	23.79	1793	67	0.015

Valid Samples: 8 8

Monthly Average: 24 0.017

Scheduled Samples: 8 8

Standard Deviation: 20 0.011

Percent Data Captured: 100% 100%

Maximum: 67 0.038

Minimum: 7 0.008

NOTES

DEFINITIONS and CALCULATIONS

T_{av} = average temperature in degrees Celcius

P_{av} = average station pressure in millimeters of mercury

$$P_f = (((\text{Temp in } ^\circ\text{Kelvin} * \text{Temp Slope}) + \text{Temp Int.})) * 1.868$$

$$P_f = ((\text{Temp in } ^\circ\text{Kelvin} * 0.0664) + (-0.4213)) * 1.868$$

P_g/P_a = pressure ratio of P_f and $P_{av} = 1 - P_f/P_{av}$

Q_a = look up table volumetric flow rate

Q_{std} = total sample volumetric flow rate corrected to standard conditions

V_{std} = total sample volume corrected to standard conditions

TSP = mass concentration in $\mu\text{g}/\text{std m}^3$

Lead = mass concentration in $\mu\text{g}/\text{std m}^3$



PM₁₀ Analysis

The Doe Run Company



PM₁₀ Analysis

The Doe Run Company



PM₁₀ Analysis

The Doe Run Company

NOTES

DEFINITIONS and CALCULATIONS

T_{av} = average temperature in degrees Celcius

P_{av} = average station pressure in millimeters of mercury

$$P_f = ((\text{Temp in } {}^\circ\text{Kelvin} * \text{Temp Slope}) + \text{Temp Int.}) * 1.868$$

$$P_r = ((\text{Temp in } {}^\circ\text{Kelvin} * 0.0664) + (-0.4213)) * 1.868$$

P_o/P_a = pressure ratio of P_f and $P_{av} = 1 - Pf/P_{av}$

Q_a = look up table volumetric flow rate

Q_{std} = sample volumetric flow rate corrected to standard conditions

V_{std} = sample volume corrected to standard conditions



PM₁₀ Analysis

The Doe Run Company

NOTES

Filter Blank QA		Nominal Airflow						Tolerance $\pm \mu\text{m}^3$			
2/29/2012	272037	-0.0024	25	760.0	36.2	0.952	1.153	1.153	24.00	1660	-1.5

DEFINITIONS and CALCULATIONS

T_{av} = average temperature in degrees Celcius

P_{av} = average station pressure in millimeters of mercury

$$P_t = ((\text{Temp in } {}^\circ\text{K} * \text{Temp Slope}) + \text{Temp Int.}) * 1.868$$

$$P_r = (\text{Temp in } {}^{\circ}\text{Kelvin} * 0.0664) + (-0.4213)) * 1.868$$

P_o/P_a = pressure ratio of P_f and $P_{av} = 1 - Pf/P_{av}$

Q_a = look up table volumetric flow rate

Q_{std} = sample volumetric flow rate corrected to standard conditions

V_{std} = sample volume at low T converted to standard

PM₁₀ Analysis

BARR

The Doe Run Company

NOTES

DEFINITIONS and CALCULATIONS

T_{av} = average temperature in degrees Celcius

P_{av} = average station pressure in millimeters of mercury

P_{av} = Average station pressure in millimeters of mercury

$$B = ((\text{Temp in } ^\circ\text{Kelvin} - \text{Temp Slope}), \text{Temp Int.})$$

P_f/P_a = pressure ratio of P_f and $P_{av} = 1 - Pf/P_{av}$

Q_3 = look up table volumetric flow rate

$\Omega_{v, \text{c}}$ = sample volumetric flow rate corrected to standard conditions

V_s = sample volume corrected to standard conditions

Lab Results (Lead and Cadmium)



120 East Davis Street
P.O. Box 30
Fayette, MO 65248-0030

Phone: (660) 248-1911
Fax: (660) 248-1921
<http://www.inovatia.com>

ANALYSIS REPORT

Client Information:

Barr Engineering Company
7390 Ohms Lane
Edina, MN 55439-2330

Chain of Custody No.: 12-0165
Date Received: 02/22/12
Analysis Method: 40 CFR §50
Appendix G

Location**National**

Lab No.	Filter ID	Date	Site	µg Pb/Filter	µg Cd/Filter	Date - Analyst
120920	8462319	02/01/12	#3 East - WTP	34	< 10	03/09/12 - DS
120923	8462310	02/02/12	#3 East - WTP	64	< 10	03/09/12 - DS
120926	8462301	02/03/12	#3 East - WTP	< 10	< 10	03/09/12 - DS
120929	8545392	02/06/12	#3 East - WTP	27	< 10	03/09/12 - DS
120932	8545382	02/07/12	#3 East - WTP	25	< 10	03/09/12 - DS
120935	8545373	02/08/12	#3 East - WTP	12	< 10	03/09/12 - DS
120938	8545363	02/09/12	#3 East - WTP	14	< 10	03/12/12 - DS
120941	8545355	02/10/12	#3 East - WTP	18	< 10	03/12/12 - DS
120966	8462316	02/01/12	#1 Ozark	45	< 10	03/09/12 - DS
120967	8462317	02/01/12	#2 Soccer	228	< 10	03/09/12 - DS
120968	8462307	02/02/12	#1 Ozark	30	< 10	03/09/12 - DS
120969	8462308	02/02/12	#2 Soccer	58	< 10	03/09/12 - DS
120970	8545398	02/03/12	#1 Ozark	< 10	< 10	03/09/12 - DS
120971	8545399	02/03/12	#2 Soccer	< 10	< 10	03/09/12 - DS
120972	8545389	02/06/12	#1 Ozark	28	< 10	03/09/12 - DS
120973	8545390	02/06/12	#2 Soccer	44	< 10	03/09/12 - DS
120974	8545379	02/07/12	#1 Ozark	13	< 10	03/09/12 - DS
120975	8545380	02/07/12	#2 Soccer	15	< 10	03/09/12 - DS
120976	8545370	02/08/12	#1 Ozark	23	< 10	03/09/12 - DS
120977	8545371	02/08/12	#2 Soccer	60	< 10	03/09/12 - DS
120978	8545360	02/09/12	#1 Ozark	47	< 10	03/09/12 - DS
120979	8545361	02/09/12	#2 Soccer	23	< 10	03/09/12 - DS
120980	8545358	02/10/12	#1 Ozark	15	< 10	03/09/12 - DS
120981	8545359	02/10/12	#2 Soccer	48	< 10	03/09/12 - DS

Submitted by:

Digitally signed by Jennifer Vandelicht
DN: cn=Jennifer Vandelicht,
o=Inovatia Laboratories,
LLC, ou=Quality Assurance,
email=jvandelicht@inovatia.
com, c=US
Date: 2012.03.13 16:43:16
-05'00'

3/13/12

Date

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120 East Davis Street
P.O. Box 30
Fayette, MO 65248-0030

Phone: (660) 248-1911
Fax: (660) 248-1921
<http://www.inovatia.com>

ANALYSIS REPORT

Client Information:

Barr Engineering Company
7390 Ohms Lane
Edina, MN 55439-2330

Chain of Custody No.: 12-0177
Date Received: 03/02/12
Analysis Method: 40 CFR §50
Appendix G

Location **National**

Lab No.	Filter ID	Date	Site	µg Pb/Filter	µg Cd/Filter	Date - Analyst
121023	8545345	02/13/12	#3 East - WTP	16	< 10	03/27/12 - DS
121026	8545336	02/14/12	#3 East - WTP	23	< 10	03/27/12 - DS
121029	8545327	02/15/12	#3 East - WTP	< 10	< 10	03/27/12 - DS
121032	8545317	02/16/12	#3 East - WTP	28	< 10	03/27/12 - DS
121035	8545307	02/17/12	#3 East - WTP	27	< 10	03/27/12 - DS
121051	8545349	02/13/12	#1 Ozark	22	< 10	03/27/12 - DS
121052	8545350	02/13/12	#2 Soccer	21	< 10	03/27/12 - DS
121053	8545339	02/14/12	#1 Ozark	24	< 10	03/27/12 - DS
121054	8545340	02/14/12	#2 Soccer	59	< 10	03/27/12 - DS
121055	8545330	02/15/12	#1 Ozark	< 10	< 10	03/27/12 - DS
121056	8545331	02/15/12	#2 Soccer	< 10	< 10	03/27/12 - DS
121057	8545321	02/16/12	#1 Ozark	39	< 10	03/27/12 - DS
121058	8545322	02/16/12	#2 Soccer	54	< 10	03/27/12 - DS
121059	8545304	02/17/12	#1 Ozark	32	< 10	03/27/12 - DS
121060	8545305	02/17/12	#2 Soccer	73	< 10	03/27/12 - DS

Submitted by:

Digitally signed by Jennifer
Vandelicht
D:\Users\jennifer.vandelicht.
Inovatia Laboratories, LLC,
lqu=Quality Assurance,
email=jvandelicht@inovatia.
com, c4US
Date: 2012.03.28 10:36:58
-05'00'

3/28/12

Date

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120 East Davis Street
P.O. Box 30
Fayette, MO 65248-0030

Phone: (660) 248-1911
Fax: (660) 248-1921
<http://www.inovatia.com>

ANALYSIS REPORT

Client Information:

Barr Engineering Company
7390 Ohms Lane
Edina, MN 55439-2330

Chain of Custody No.: 12-0228
Date Received: 03/15/12
Analysis Method: 40 CFR §50
Appendix G

Location**National**

Lab No.	Filter ID	Date	Site	µg Pb/Filter	µg Cd/Filter	Date - Analyst
121243	8546198	02/20/12	#3 East - WTP	10	< 10	03/30/12 - DS
121246	8546188	02/21/12	#3 East - WTP	36	< 10	03/30/12 - DS
121249	8546180	02/22/12	#3 East - WTP	46	< 10	03/30/12 - DS
121252	8546169	02/23/12	#3 East - WTP	222	< 10	03/28/12 - DS
121255	8546161	02/24/12	#3 East - WTP	122	< 10	03/28/12 - DS
121258	8546150	02/27/12	#3 East - WTP	66	< 10	03/28/12 - DS
121261	8546141	02/28/12	#3 East - WTP	87	< 10	03/30/12 - DS
121264	8546127	02/29/12	#3 East - WTP	< 10	< 10	03/30/12 - DS
121265	8546132	02/29/12	#3 East - WTP	39	< 10	03/30/12 - DS
121290	8545302	02/20/12	#1 Ozark	22	< 10	03/28/12 - DS
121291	8545303	02/20/12	#2 Soccer	26	< 10	03/28/12 - DS
121292	8546185	02/21/12	#1 Ozark	58	< 10	03/28/12 - DS
121293	8546186	02/21/12	#2 Soccer	61	< 10	03/28/12 - DS
121294	8546183	02/22/12	#1 Ozark	54	< 10	03/28/12 - DS
121295	8546184	02/22/12	#2 Soccer	71	< 10	03/28/12 - DS
121296	8546166	02/23/12	#1 Ozark	39	< 10	03/28/12 - DS
121297	8546167	02/23/12	#2 Soccer	72	< 10	03/28/12 - DS
121298	8546164	02/24/12	#1 Ozark	22	< 10	03/28/12 - DS
121299	8546165	02/24/12	#2 Soccer	31	< 10	03/28/12 - DS
121300	8546147	02/27/12	#1 Ozark	18	< 10	03/28/12 - DS
121301	8546148	02/27/12	#2 Soccer	55	< 10	03/28/12 - DS
121302	8546138	02/28/12	#1 Ozark	28	< 10	03/28/12 - DS
121303	8546139	02/28/12	#2 Soccer	48	< 10	03/28/12 - DS
121304	8546136	02/29/12	#1 Ozark	69	< 10	03/28/12 - DS
121305	8546137	02/29/12	#2 Soccer	36	< 10	03/28/12 - DS

Submitted by:

Jennifer Vandelicht
Digitally signed by Jennifer
Vandelicht
DN: cn=Jennifer Vandelicht,
o=Inovatia Laboratories, LLC,
ou=Quality Assurance,
email=jvandelicht@inovatia.
com, c=US
Date: 2012.03.30 15:18:15
-05'00'

3/30/12

Date

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120 East Davis Street
P.O. Box 30
Fayette, MO 65248-0030

Phone: (660) 248-1911
Fax: (660) 248-1921
<http://www.inovatia.com>

ANALYSIS REPORT

Client Information:

Barr Engineering Company
7390 Ohms Lane
Edina, MN 55439-2330

Chain of Custody No.: 12-0165
Date Received: 02/22/12
Analysis Method: 40 CFR §50
Appendix G

Location Big River

Lab No.	Filter ID	Date	Site	µg Pb/Filter	µg Cd/Filter	Date - Analyst
120907	8462321	02/01/12	#4 Primary	42	< 10	03/09/12 - DS
120908	8462312	02/02/12	#4 Primary	67	< 10	03/09/12 - DS
120909	8462322	02/02/12	#4 QA	70	< 10	03/09/12 - DS
120910	8462303	02/03/12	#4 Primary	< 10	< 10	03/09/12 - DS
120911	8545394	02/06/12	#4 Primary	14	< 10	03/09/12 - DS
120912	8545384	02/07/12	#4 Primary	22	< 10	03/09/12 - DS
120913	8545385	02/07/12	#4 QA	23	< 10	03/09/12 - DS
120914	8545375	02/08/12	#4 Primary	< 10	< 10	03/09/12 - DS
120915	8545365	02/09/12	#4 Primary	14	< 10	03/09/12 - DS
120916	8545366	02/09/12	#4 QA	14	< 10	03/09/12 - DS
120917	8545357	02/10/12	#4 Primary	17	< 10	03/09/12 - DS

Submitted by:

Jennifer Vandelicht
Digital signature of Jennifer Vandelicht,
Inovatia Laboratories, LLC.
Date: 2012/03/13 16:45:40 -05'00'
Email: jennifer.vandelicht@inovatia.com

3/13/12

Date

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120 East Davis Street
P.O. Box 30
Fayette, MO 65248-0030

Phone: (660) 248-1911
Fax: (660) 248-1921
<http://www.inovatia.com>

ANALYSIS REPORT

Client Information:

Barr Engineering Company
7390 Ohms Lane
Edina, MN 55439-2330

Chain of Custody No.: 12-0177
Date Received: 03/02/12
Analysis Method: 40 CFR §50
Appendix G

Location Big River

Lab No.	Filter ID	Date	Site	µg Pb/Filter	µg Cd/Filter	Date - Analyst
121014	8545347	02/13/12	#4 Primary	24	< 10	03/27/12 - DS
121015	8545338	02/14/12	#4 Primary	20	< 10	03/27/12 - DS
121016	8545348	02/14/12	#4 QA	19	< 10	03/27/12 - DS
121017	8545329	02/15/12	#4 Primary	110	< 10	03/27/12 - DS
121018	8545319	02/16/12	#4 Primary	14	< 10	03/27/12 - DS
121019	8545320	02/16/12	#4 QA	15	< 10	03/27/12 - DS
121020	8545309	02/17/12	#4 Primary	35	< 10	03/27/12 - DS

Submitted by: _____

Jennifer Vandelicht
Digitally signed by Jennifer Vandelicht
Date: 2012.03.28 10:38:02 -05'00'
Comments: CCR/US
Date: 2012.03.28 10:38:02 -05'00'

3/28/12
Date

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120 East Davis Street
P.O. Box 30
Fayette, MO 65248-0030

Phone: (660) 248-1911
Fax: (660) 248-1921
<http://www.inovatia.com>

ANALYSIS REPORT

Client Information:

Barr Engineering Company
7390 Ohms Lane
Edina, MN 55439-2330

Chain of Custody No.: 12-0228
Date Received: 03/15/12
Analysis Method: 40 CFR §50
Appendix G

Location Big River

Lab No.	Filter ID	Date	Site	µg Pb/Filter	µg Cd/Filter	Date - Analyst
121230	8546200	02/20/12	#4 Primary	< 10	< 10	03/28/12 - DS
121231	8546190	02/21/12	#4 Primary	24	< 10	03/28/12 - DS
121232	8545301	02/21/12	#4 QA	26	< 10	03/28/12 - DS
121233	8546182	02/22/12	#4 Primary	14	< 10	03/28/12 - DS
121234	8546171	02/23/12	#4 Primary	59	< 10	03/28/12 - DS
121235	8546172	02/23/12	#4 QA	52	< 10	03/28/12 - DS
121236	8546163	02/24/12	#4 Primary	70	< 10	03/28/12 - DS
121237	8546152	02/27/12	#4 Primary	34	< 10	03/28/12 - DS
121238	8546143	02/28/12	#4 Primary	23	< 10	03/28/12 - DS
121239	8546153	02/28/12	#4 QA	26	< 10	03/28/12 - DS
121240	8546134	02/29/12	#4 Primary	29	< 10	03/30/12 - DS

Submitted by:

Jennifer Vandelicht
Inovatia Laboratories, LLC.
Quality Assurance,
email:jvandelicht@inovatia.
com
Date: 2012.03.30 15:19:15
-0500

3/30/12
Date

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Meteorological Data

Meteorological Report
The Doe Run Company
Wind Speed

Average Interval: 01 Hour

Units: mph

Sampling Frequency: 01 Second

Site Name: Rivermines

2012	Hour	24 Hour Avg																									
		Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Max
1-Feb	3.7	3.8	2.7	1.6	1.7	1.5	2.0	0.2	0.6	2.9	2.9	2.8	4.7	4.4	5.3	7.0	6.4	5.0	2.6	1.9	0.4	0.7	1.2	0.5	7.0	2.8	
2-Feb	0.5	1.6	2.8	2.8	3.3	3.4	2.8	0.8	1.2	0.7	1.4	2.3	3.1	3.2	3.7	3.9	4.9	2.6	1.7	2.1	2.1	0.3	0.6	1.5	4.9	2.2	
3-Feb	3.0	2.9	2.7	2.0	0.4	1.3	1.6	2.6	2.6	5.5	6.1	5.5	5.3	5.6	6.2	5.5	6.7	6.4	6.2	5.2	5.2	5.6	3.4	4.9	6.7	4.3	
4-Feb	3.5	2.1	5.9	4.9	3.6	0.6	0.0	0.2	0.3	0.6	0.0	2.9	4.7	8.4	8.1	5.2	4.3	4.5	3.8	2.9	2.8	1.8	1.0	2.7	8.4	3.1	
5-Feb	2.8	3.0	4.8	5.3	4.8	5.1	6.4	5.8	7.3	7.0	6.1	6.2	6.5	6.3	4.9	3.8	3.3	1.8	0.1	0.3	0.0	0.0	0.2	1.9	7.3	3.9	
6-Feb	0.5	1.5	1.6	1.5	2.0	2.3	0.8	2.5	0.9	0.1	3.1	4.5	5.9	4.9	4.9	5.8	4.1	1.1	0.9	0.2	0.2	0.7	2.0	2.3	5.9	2.2	
7-Feb	1.6	1.9	0.9	1.2	2.4	1.2	2.2	1.1	0.2	0.8	1.6	1.5	2.2	4.3	7.8	2.9	2.3	2.8	3.3	2.9	8.0	4.9	5.0	3.5	7.8	2.7	
8-Feb	5.0	6.2	6.4	7.5	6.6	5.8	6.0	7.0	7.3	6.4	6.6	6.4	6.7	5.7	5.5	4.3	4.4	1.4	0.3	0.2	0.0	0.2	0.4	0.0	7.5	4.4	
9-Feb	0.2	0.0	0.0	0.4	0.2	0.8	0.8	2.0	1.6	0.5	1.5	2.4	3.5	2.9	1.8	3.3	3.3	3.4	1.7	2.8	2.4	1.1	1.7	1.3	3.5	1.7	
10-Feb	2.0	1.8	3.7	4.2	4.9	4.9	5.1	4.8	4.5	5.4	4.6	5.8	5.9	5.1	3.2	5.4	14.2	12.4	12.8	12.7	14.5	13.7	11.2	13.6	14.5	7.4	
11-Feb	13.0	10.9	8.7	11.8	12.9	11.8	11.3	12.5	11.7	11.4	10.8	12.8	12.6	13.8	13.2	12.7	13.9	9.7	8.5	8.5	5.7	6.5	6.2	4.7	13.9	10.6	
12-Feb	2.4	2.2	2.3	2.6	3.9	3.6	3.6	3.6	5.0	6.2	8.7	7.3	6.5	5.8	5.0	4.6	4.1	2.5	0.1	0.1	0.0	0.3	0.1	0.1	0.8	8.7	3.3
13-Feb	0.5	0.3	1.5	3.5	3.9	4.3	6.2	7.8	6.2	5.8	7.0	7.5	10.1	7.2	5.7	7.8	8.0	7.0	6.7	6.8	5.9	6.8	7.1	6.8	10.1	5.8	
14-Feb	5.7	5.1	4.5	4.1	3.4	3.8	2.2	1.3	1.1	2.3	4.3	4.1	3.3	3.7	5.0	4.0	5.6	5.2	3.8	4.4	2.5	2.5	2.9	3.3	5.7	3.7	
15-Feb	6.5	6.6	8.3	7.8	5.0	4.6	5.7	4.7	3.5	6.0	8.6	7.4	7.1	5.9	4.5	4.2	2.6	2.1	8.9	6.6	5.0	0.3	0.1	0.0	8.6	5.0	
16-Feb	0.8	1.7	2.0	2.5	4.1	4.3	5.2	3.8	5.8	9.6	6.8	8.5	7.5	7.3	7.2	7.5	5.0	2.3	0.7	2.0	0.1	0.5	2.3	2.0	9.6	4.1	
17-Feb	0.3	0.1	0.3	1.2	0.3	0.0	0.1	0.3	1.4	0.3	5.7	6.9	7.1	7.1	6.5	7.0	5.9	4.3	2.7	1.0	1.1	0.2	0.2	1.5	7.1	2.6	
18-Feb	0.1	1.6	0.7	2.4	3.8	3.9	5.1	5.2	6.3	7.0	6.4	6.4	5.1	5.7	5.4	5.5	5.5	3.9	4.4	4.1	5.0	4.8	4.4	4.3	7.0	4.5	
19-Feb	4.2	2.7	3.9	4.8	4.0	4.4	4.5	4.3	5.2	6.5	7.5	8.1	7.4	8.2	6.5	6.6	4.9	3.5	2.8	0.1	0.6	0.6	1.3	0.3	8.2	4.3	
20-Feb	0.0	0.2	0.0	0.2	0.8	1.3	0.9	0.9	2.1	5.5	6.2	8.3	7.6	8.9	9.9	9.5	9.1	7.9	8.1	6.1	6.6	7.5	9.7	8.8	9.9	5.3	
21-Feb	10.2	11.5	11.8	13.1	11.1	8.4	8.8	8.6	8.3	7.8	8.9	9.8	9.1	7.5	7.1	9.0	8.4	6.5	1.3	1.7	0.2	0.0	0.0	0.3	13.1	7.1	
22-Feb	1.1	0.7	0.1	0.6	0.7	1.4	1.3	1.8	0.9	1.9	7.3	8.0	8.7	9.3	8.7	9.4	5.9	3.5	0.1	1.6	0.3	0.0	0.1	0.0	9.4	3.1	
23-Feb	0.0	0.3	1.4	1.6	0.6	2.4	3.6	4.6	8.0	8.2	6.4	7.6	7.9	7.7	8.5	9.0	6.9	6.3	3.5	8.1	7.9	8.4	7.6	9.9	9.9	5.7	
24-Feb	9.7	9.0	11.2	10.2	12.2	11.4	10.1	9.1	9.3	8.3	9.0	9.1	8.1	9.3	12.0	9.8	7.5	6.0	5.4	2.4	3.0	2.8	2.2	0.9	12.2	7.8	
25-Feb	1.8	3.7	3.7	4.2	5.2	6.2	7.6	8.5	10.4	8.8	7.5	6.7	5.8	5.1	4.8	4.7	3.7	0.6	0.0	1.0	2.4	2.6	4.5	4.6	10.4	4.8	
26-Feb	6.1	4.4	4.8	5.5	7.7	7.9	9.9	10.8	8.1	13.1	13.5	13.7	15.2	16.0	13.3	12.9	10.9	8.1	5.8	5.1	5.9	8.0	7.9	8.3	16.0	9.3	
27-Feb	7.6	4.3	4.1	3.6	3.5	1.8	3.2	5.3	6.9	8.4	7.1	6.7	7.6	6.5	5.7	5.0	5.1	6.8	3.2	2.8	2.7	1.9	0.8	0.1	8.4	4.6	
28-Feb	0.0	0.2	0.0	0.3	2.0	2.1	4.1	2.8	3.0	3.4	4.3	5.6	6.3	7.1	8.1	8.0	9.2	8.4	6.6	7.4	10.1	7.0	6.6	12.9	12.9	5.3	
29-Feb	16.0	16.3	16.7	8.9	7.4	5.2	4.4	5.3	7.5	9.6	10.2	11.1	13.2	14.6	14.0	13.5	14.7	11.8	9.5	6.8	4.9	5.9	5.8	3.4	16.7	9.9	



Maximum Hour//Monthly Average	16.7
Total Hours In Month	696
Valid Hours//Percent Data Captured	696
	100.0%

Meteorological Report
The Doe Run Company
Wind Direction

Site Name: Rivermines

Average Interval: 01 Hour

Units: Degrees

Sampling Frequency: 01 Second

2012 Day	Hour																								24 Hour Avg	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Feb	251	238	251	256	215	303	319	182	253	39	25	3	348	348	340	0	351	346	332	335	327	273	268	183	241	
2-Feb	190	219	217	214	215	226	217	215	220	264	16	86	82	94	82	100	81	89	108	110	108	143	71	72	143	
3-Feb	121	114	73	42	32	60	104	76	73	120	136	135	128	118	125	125	131	114	122	129	116	140	144	348	118	
4-Feb	3	77	116	105	154	84	49	99	17	15	161	248	270	309	313	281	287	274	269	262	242	259	254	260	184	
5-Feb	262	287	318	325	339	336	341	349	350	348	352	348	333	354	342	314	302	276	217	233	180	203	225	232	299	
6-Feb	217	232	231	234	235	239	221	238	256	260	262	270	286	284	273	285	261	270	187	332	179	186	219	220	245	
7-Feb	198	205	200	232	221	212	220	232	225	360	287	291	227	278	330	258	269	283	269	262	9	355	356	331	254	
8-Feb	327	325	333	325	331	328	334	339	337	342	340	337	333	329	331	320	322	316	331	320	343	324	330	202	325	
9-Feb	141	197	235	302	274	229	205	212	231	298	272	241	219	213	203	199	201	180	184	187	186	190	172	215	216	
10-Feb	206	189	203	207	211	213	216	220	219	222	233	219	241	252	259	273	332	320	328	320	328	323	326	258		
11-Feb	320	318	310	325	321	323	320	324	320	321	323	337	326	322	321	326	319	323	316	309	298	305	308	308	318	
12-Feb	275	277	288	285	270	275	287	297	310	336	336	314	326	280	284	290	283	281	136	174	217	184	272	340	274	
13-Feb	348	168	176	171	169	171	197	197	190	181	177	180	183	171	172	174	181	186	186	188	193	198	199	197	190	
14-Feb	197	206	214	219	233	237	236	238	260	288	276	271	270	265	243	212	201	181	174	185	160	119	154	162	217	
15-Feb	189	188	191	184	173	170	191	171	177	188	187	186	179	175	186	186	184	167	163	172	184	336	353	183	194	
16-Feb	250	252	263	284	297	300	300	302	294	317	308	311	297	310	302	317	299	296	218	207	178	204	227	201	272	
17-Feb	194	184	201	215	210	168	223	238	239	347	172	173	185	208	211	194	201	184	176	190	236	204	196	223	207	
18-Feb	200	224	215	19	345	341	11	16	11	18	14	21	14	32	37	25	26	36	37	35	28	33	44	33	76	
19-Feb	34	27	17	18	14	3	359	5	8	2	16	20	14	16	26	25	27	54	69	341	103	92	88	358	72	
20-Feb	161	177	355	271	76	49	185	3	91	150	158	161	151	145	146	161	170	162	144	165	178	177	178	181	158	
21-Feb	178	190	211	240	243	244	244	245	251	282	256	256	256	249	247	237	236	228	212	211	220	187	183	224	230	
22-Feb	186	203	193	209	195	211	187	227	259	257	227	240	233	240	237	251	312	331	33	4	184	193	170	193	208	
23-Feb	188	188	47	44	45	48	72	102	121	116	129	154	208	232	243	244	258	300	284	294	285	300	289	276	188	
24-Feb	280	273	285	271	272	279	287	292	295	284	285	282	283	292	301	288	283	285	297	277	248	224	228	242	255	275
25-Feb	259	265	267	271	274	282	294	305	309	309	298	307	312	278	275	277	274	285	150	118	132	138	145	152	248	
26-Feb	148	171	162	170	173	168	165	171	175	187	185	205	198	203	184	187	191	185	178	177	183	189	203	202	183	
27-Feb	208	236	245	255	244	251	313	359	357	347	357	0	351	3	20	349	339	9	45	59	71	77	108	358	207	
28-Feb	180	123	136	84	108	87	102	89	87	143	150	168	152	155	164	165	164	169	165	177	186	180	190	145		
29-Feb	198	199	221	218	246	243	245	250	243	248	248	254	248	250	259	254	246	251	255	281	270	268	267	261	248	

	Total Hours in Month	696
	Valid Hours	696
	Percent Data Captured	100.0%

Meteorological Report
The Doe Run Company
 $\Sigma \theta$

Site Name: Rivermines

Average Interval: 01 Hour

Units: Degrees

2012	Hour																									24 Hour Avg
		Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1-Feb	19.0	18.1	10.9	12.3	16.8	18.5	19.5	2.3	11.9	28.4	35.9	34.1	25.8	31.0	24.7	20.0	15.4	12.1	9.0	10.1	4.8	22.9	15.3	8.8	18	
2-Feb	8.8	12.7	13.9	16.6	15.8	15.6	14.1	10.1	11.8	18.8	16.9	29.7	30.4	44.4	31.0	28.7	19.4	17.3	11.8	15.8	18.7	5.7	13.0	13.8	18	
3-Feb	15.4	18.9	20.4	6.7	1.6	6.3	14.5	22.3	18.8	20.8	21.6	22.7	21.5	21.6	22.0	22.5	21.8	20.6	20.8	23.2	21.5	22.8	23.0	18.7	19	
4-Feb	13.2	14.4	17.3	48.6	21.4	9.1	0.2	4.6	2.6	4.2	1.9	23.1	28.3	20.3	18.2	19.0	20.2	18.0	16.8	14.9	13.8	13.9	11.5	14.3	15	
5-Feb	14.5	16.4	13.3	12.9	16.2	14.5	14.7	14.4	15.4	16.0	17.4	18.4	14.1	15.9	15.8	17.6	15.7	13.6	4.8	4.4	0.2	0.8	4.7	14.7	13	
6-Feb	7.8	11.6	13.1	13.5	12.6	13.6	8.5	13.8	7.7	4.9	28.4	28.5	28.7	29.4	30.2	26.3	18.2	15.7	3.5	19.2	1.5	7.5	11.9	18.8	16	
7-Feb	12.3	13.7	6.8	10.0	16.1	11.4	16.5	12.2	5.8	6.3	20.9	39.5	37.7	29.2	15.8	34.1	13.8	15.1	17.5	18.7	14.8	14.2	14.1	12.3	17	
8-Feb	12.9	12.2	12.8	11.4	13.3	13.3	14.5	15.1	14.8	16.0	15.4	16.3	15.2	19.6	17.9	17.3	13.2	11.7	4.0	0.4	3.3	1.0	5.2	0.1	12	
9-Feb	6.0	1.3	1.4	15.0	6.4	16.2	10.2	17.5	14.5	8.6	24.8	26.0	22.2	27.7	20.8	16.8	16.8	16.3	20.4	18.9	19.3	13.4	17.3	17.5	16	
10-Feb	12.1	16.0	14.4	15.3	15.9	13.1	15.5	15.1	15.1	15.9	16.6	15.9	19.2	18.8	18.6	18.4	14.4	14.1	15.5	15.2	15.2	16.6	15.0	14.3	16	
11-Feb	15.5	14.1	15.5	15.6	13.1	14.6	13.6	13.6	15.1	16.2	19.7	17.5	18.9	16.7	17.0	17.5	14.3	12.6	12.6	12.7	18.5	15.6	13.9	14.5	15	
12-Feb	18.0	19.8	16.2	17.5	14.3	18.2	17.9	18.3	21.9	17.5	19.1	23.9	29.6	42.2	31.1	36.2	28.7	3.8	2.3	0.0	5.2	0.1	18.8	14.9	18	
13-Feb	11.5	6.2	9.6	16.4	15.9	20.7	17.8	15.5	19.1	18.6	19.9	19.9	20.3	21.3	20.8	21.4	19.9	19.3	18.8	17.5	15.1	18.3	15.8	14.0	17	
14-Feb	12.7	15.1	16.4	14.4	16.0	15.6	10.9	12.1	9.4	20.4	22.0	26.2	30.8	30.3	28.5	38.1	17.0	13.7	13.7	10.4	14.3	13.0	17.3	28.7	19	
15-Feb	16.9	15.4	14.4	18.6	28.2	25.7	27.6	22.8	34.9	17.8	15.2	17.4	17.9	22.7	21.6	18.9	30.7	17.4	19.7	18.4	16.5	20.3	1.4	2.1	19	
16-Feb	9.9	11.8	13.1	15.3	15.0	15.9	16.9	15.4	19.0	16.1	18.7	18.7	22.0	21.2	22.4	15.0	20.8	14.3	7.5	13.2	1.3	6.4	16.3	13.7	15	
17-Feb	3.2	1.0	4.8	9.7	5.2	0.2	4.0	6.2	10.6	5.0	23.4	28.4	24.4	19.4	26.8	22.0	18.3	11.3	12.5	10.1	10.8	1.3	4.6	16.4	12	
18-Feb	2.1	11.2	11.4	26.1	23.9	22.7	15.4	13.3	14.5	15.2	17.3	18.8	22.9	21.6	23.4	19.8	17.5	18.0	18.4	18.5	16.4	19.0	21.0	17.6	18	
19-Feb	17.1	15.4	15.1	15.6	15.4	13.0	13.2	15.9	15.1	17.0	19.7	23.9	21.3	18.1	25.4	23.3	21.8	15.7	12.2	1.2	6.7	10.1	13.0	20.7	16	
20-Feb	2.2	2.1	0.0	1.4	10.1	18.0	8.7	28.1	21.6	24.4	27.3	23.5	25.7	25.7	25.0	23.1	22.3	19.5	24.8	24.1	21.9	19.1	18.1	17.0	18	
21-Feb	17.5	15.0	16.5	19.2	17.1	20.2	18.1	17.6	20.4	18.4	20.5	20.0	21.5	28.8	22.4	22.4	20.3	14.6	7.7	8.0	2.1	0.3	0.2	6.9	16	
22-Feb	17.5	9.9	1.6	8.2	9.2	18.4	7.0	12.6	10.0	17.6	17.0	19.3	20.3	21.2	22.2	20.4	17.4	13.3	4.1	10.6	9.1	0.2	23.1	1.5	13	
23-Feb	0.2	8.0	23.8	8.1	20.8	23.3	20.6	36.8	21.2	18.9	24.5	25.4	27.4	27.0	23.8	21.9	20.7	17.0	17.3	19.2	22.8	20.2	20.2	20.3	20	
24-Feb	19.3	18.9	19.8	19.5	20.0	20.7	22.0	20.9	21.4	20.8	22.3	22.0	22.3	24.0	18.9	22.8	23.8	20.2	17.0	12.6	10.9	16.4	19.7	9.8	19	
25-Feb	16.4	24.5	14.8	17.9	17.5	19.4	18.5	17.2	20.4	20.3	23.8	34.0	49.3	37.5	48.8	42.3	28.5	15.6	1.0	8.5	17.8	17.9	17.8	21.9	23	
26-Feb	22.5	20.7	22.9	19.8	19.0	17.9	18.3	19.1	17.3	19.1	18.3	19.3	18.8	19.1	17.7	17.4	15.9	13.4	13.4	11.2	13.5	13.8	13.4	18		
27-Feb	14.8	18.2	17.1	13.1	11.9	11.7	17.9	18.6	17.9	18.9	27.4	23.4	31.0	27.0	29.1	21.7	15.3	15.7	14.3	15.4	15.0	10.3	2.1	18		
28-Feb	2.6	5.2	0.9	9.2	25.8	25.0	22.0	22.8	20.7	23.0	24.1	28.8	27.1	22.8	20.0	21.6	19.8	19.6	19.5	20.7	17.4	18.9	15.4	19		
29-Feb	15.4	15.2	29.3	18.2	18.0	16.6	15.8	16.8	19.7	20.3	19.9	22.2	21.4	19.9	21.4	20.3	20.2	20.4	18.7	19.0	17.8	19.2	18.0	14.8	19	

Total Hours in Month	696
Valid Hours	696
Percent Data Captured	100.0%

BARR

Meteorological Report
The Doe Run Company
Temperature

Site Name: Rivermines

Average Interval: 01 Hour

Units: Deg. C

Sampling Frequency: 01 Second

24 Hour

2012	Hour	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Max	Avg
Day																											
1-Feb	14	14	13	12	10	8	7	6	10	12	14	15	18	16	17	17	16	14	11	9	7	6	4	3	18.9	11.2	
2-Feb	1	0	0	0	0	0	-1	-1	2	7	12	15	16	17	17	17	16	14	11	11	10	8	6	6	17.1	7.6	
3-Feb	8	8	7	4	3	3	4	3	5	10	10	10	9	9	10	10	9	8	8	8	8	9	9	9	10.3	7.5	
4-Feb	8	8	8	9	9	9	9	9	9	10	11	14	16	14	12	11	10	9	9	8	8	7	7	7	15.7	9.4	
5-Feb	7	7	6	6	6	5	5	4	4	4	4	4	4	4	4	4	5	5	4	2	1	0	-1	-1	7.4	3.7	
6-Feb	-2	-2	-3	-3	-3	-3	-4	-3	0	3	6	9	10	10	11	11	10	8	3	1	-1	-2	-2	-2	11.1	2.2	
7-Feb	-2	-3	-3	-4	-4	-4	-3	-3	-1	1	5	8	9	10	9	9	8	7	8	5	4	3	2	1	9.9	2.8	
8-Feb	1	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.2	0.5	
9-Feb	0	0	0	0	0	0	0	0	1	1	2	2	2	2	2	2	2	1	1	1	1	1	1	1	2.1	0.9	
10-Feb	1	1	2	2	2	1	1	1	2	2	2	2	3	4	4	4	4	1	0	-1	-2	-3	-4	-5	3.9	0.6	
11-Feb	-7	-7	-7	-7	-7	-7	-7	-8	-8	-8	-7	-5	-4	-3	-3	-2	-2	-2	-3	-4	-5	-5	-5	-6	-7	-1.9	-5.4
12-Feb	-8	-9	-9	-9	-9	-9	-9	-10	-9	-7	-5	-3	-1	1	3	3	3	3	1	-3	-4	-5	-6	-6	3.3	-4.4	
13-Feb	-7	-7	-4	-2	-1	-1	-1	-1	-1	0	0	0	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	0.2	-1.5	
14-Feb	0	0	0	0	0	1	1	1	2	2	4	5	6	7	7	8	7	5	4	3	2	2	2	3	7.7	3.0	
15-Feb	4	4	4	4	4	4	3	4	4	5	5	6	6	6	7	7	7	7	7	7	7	7	7	7	7.4	5.5	
16-Feb	7	7	7	7	7	7	7	7	7	7	8	8	9	9	8	8	6	3	1	0	-1	-1	-1	9.2	5.8		
17-Feb	-2	-2	-3	-3	-3	-4	-4	-3	-1	3	9	10	12	13	14	13	13	11	8	6	3	2	2	3	13.8	3.9	
18-Feb	3	3	3	4	5	5	4	4	4	4	5	6	6	6	6	6	5	5	4	4	4	3	3	6.5	4.8		
19-Feb	2	1	1	1	0	-1	-1	-1	0	2	3	5	6	6	7	7	6	5	3	0	-1	-2	-2	-4	6.8	1.8	
20-Feb	-5	-5	-6	-6	-6	-6	-7	-5	-1	4	6	8	9	10	11	11	10	9	8	7	7	8	7	7	10.5	3.0	
21-Feb	6	6	7	8	7	7	7	7	8	8	8	10	11	13	13	13	13	12	9	7	4	2	1	1	13.5	7.9	
22-Feb	1	0	-1	-2	-2	-2	-3	-1	5	11	15	15	17	17	19	19	18	16	14	12	9	5	3	3	19.1	8.0	
23-Feb	3	5	5	5	5	5	7	9	11	13	15	16	19	21	23	23	23	20	18	17	14	12	11	10	23.1	12.9	
24-Feb	9	7	6	5	4	4	4	4	4	4	4	5	5	7	7	7	6	6	5	3	2	0	0	0	8.8	4.5	
25-Feb	0	1	2	0	0	0	-1	-1	0	1	2	4	5	8	7	7	7	6	2	0	1	1	1	2	7.3	2.2	
26-Feb	1	2	1	1	1	2	2	3	6	9	11	14	15	18	18	16	16	15	13	12	11	11	11	11	16.4	8.9	
27-Feb	11	11	11	10	9	7	6	7	9	9	10	11	12	13	13	13	12	9	8	6	5	3	1	1	13.2	9.1	
28-Feb	-1	-1	-1	0	3	4	5	5	6	8	9	12	15	16	17	17	17	16	16	15	14	15	15	17	17.1	9.9	
29-Feb	18	19	18	13	13	12	11	11	14	16	17	19	19	20	19	19	18	16	15	14	12	12	11	10	19.5	15.1	

Maximum Hour//Monthly Average	23.1	4.9
Total Hours In Month	696	
Valid Hours	696	
Percent Data Captured	100.0%	

BARR

Meteorological Report
The Doe Run Company
Site Pressure

Site Name: Rivermines

Average Interval: 01 Hour

Units: mmHg

Sampling Frequency: 01 Second

2012	Hour	24 Hour																											
		Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Max	Avg	
1-Feb	745	746	746	746	746	746	746	747	747	747	747	747	747	748	748	746	746	746	746	746	747	748	748	749	749	749	749	749	
2-Feb	749	750	750	750	750	750	751	751	752	752	752	752	751	751	751	750	750	750	751	751	752	752	752	752	752	752	752	751	
3-Feb	752	752	752	752	752	752	752	752	752	752	752	751	751	751	749	749	749	748	748	748	748	747	747	747	747	747	752	750	
4-Feb	747	747	748	744	745	745	745	745	745	745	745	745	745	744	744	745	745	745	746	746	746	747	747	747	747	747	747	748	
5-Feb	747	748	748	748	749	749	749	750	751	751	751	752	751	751	750	750	750	749	749	749	750	752	752	752	752	752	752	751	
6-Feb	752	752	752	752	752	752	752	752	752	752	752	751	751	750	750	750	750	749	749	749	750	750	750	750	750	751	751	752	
7-Feb	751	751	750	750	751	751	751	752	752	751	751	751	751	751	750	750	750	751	751	751	751	752	752	753	753	753	753	751	
8-Feb	753	753	753	753	754	754	754	754	754	755	755	756	756	756	755	755	755	755	755	755	755	755	755	755	755	755	755	756	755
9-Feb	755	754	754	754	754	754	754	754	754	754	754	753	752	752	751	751	751	750	750	750	750	750	750	750	750	749	755	752	
10-Feb	749	748	748	748	747	747	747	747	747	747	747	747	746	745	745	745	745	746	747	747	748	749	750	751	751	752	752	748	
11-Feb	752	752	753	754	755	756	756	756	757	757	758	758	758	758	757	757	758	758	758	758	758	758	759	759	759	759	759	757	
12-Feb	759	759	758	759	759	759	760	759	758	758	758	758	758	757	757	756	755	755	754	754	754	753	753	753	752	760	758	758	
13-Feb	752	752	751	750	750	750	750	750	750	749	749	748	747	746	745	745	744	743	743	743	743	743	743	742	742	752	747	747	
14-Feb	742	741	741	741	742	742	742	743	744	744	744	744	744	743	743	744	744	744	744	744	745	745	745	745	745	745	745	745	743
15-Feb	746	746	748	748	745	748	748	748	747	747	747	746	746	745	744	744	744	744	744	744	744	743	744	744	744	744	744	747	745
16-Feb	744	744	745	745	746	746	747	748	748	750	750	750	750	750	750	750	750	750	750	750	750	750	750	751	751	751	751	749	
17-Feb	751	751	750	750	750	750	750	751	751	750	750	749	748	747	747	747	747	747	747	747	747	747	747	747	748	751	749	749	
18-Feb	747	748	747	747	747	747	748	748	748	749	749	749	748	748	747	747	747	747	747	747	747	747	747	747	747	749	748	748	
19-Feb	747	747	747	747	747	747	747	747	747	747	747	748	748	747	747	747	747	747	747	747	748	748	749	748	749	749	747	747	
20-Feb	749	750	751	751	750	750	750	751	750	750	750	749	748	747	747	745	745	744	744	744	743	743	742	742	741	740	751	747	
21-Feb	739	738	738	738	739	740	740	741	742	742	743	743	743	742	742	742	742	741	742	742	742	742	741	741	743	741	741	741	
22-Feb	740	740	739	738	738	737	737	737	737	736	736	735	735	734	733	732	731	731	731	732	732	733	733	733	733	740	735	735	
23-Feb	732	733	732	731	732	731	730	730	729	728	728	727	728	725	728	728	727	727	728	730	731	733	733	733	733	733	729	729	
24-Feb	734	735	736	736	737	738	739	741	742	743	744	745	745	745	746	746	747	747	748	748	748	749	749	749	749	749	749	743	
25-Feb	749	749	750	750	750	750	751	752	752	753	753	752	752	752	752	751	751	751	751	751	751	751	751	751	751	753	751		
26-Feb	750	751	750	750	750	750	750	750	750	749	748	747	746	746	746	746	746	746	746	747	747	748	748	749	749	751	748		
27-Feb	749	750	750	750	751	752	753	753	754	755	755	755	754	754	754	754	754	754	755	755	755	755	755	755	755	755	753		
28-Feb	754	754	754	754	753	753	753	752	752	751	751	750	748	747	746	746	743	743	742	741	741	740	739	739	754	748			
29-Feb	737	737	737	738	738	738	739	739	739	739	739	738	738	737	737	737	737	738	738	739	740	741	741	741	741	738			

Maximum Hour//Monthly Average	760	747
Total Hours in Month	696	
Valid Hours//Percent Data Captured	696	100.0%



Meteorological Report
The Doe Run Company
Precipitation

Site Name: Rivermines

Average Interval: 01 Hour
Sampling Frequency: 01 Second

2012	Hour	24 Hour																								
		Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1-Feb	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2-Feb	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.02	0.00	0.00	0.02	0.00	0.01	0.00	0.01	0.01	0.24	0.24
3-Feb	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33
4-Feb	0.08	0.17	0.11	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.37
5-Feb	0.00	0.02	0.02	0.02	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
6-Feb	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01
7-Feb	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.04	0.02	0.01	0.04	0.08
8-Feb	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.02
9-Feb	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10-Feb	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.02	0.01	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
11-Feb	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12-Feb	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13-Feb	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14-Feb	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
15-Feb	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.06	0.01	0.04	0.05	0.01	0.00	0.00	0.02	0.04	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25
16-Feb	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01
17-Feb	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18-Feb	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19-Feb	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20-Feb	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.02	0.02	
21-Feb	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22-Feb	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23-Feb	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24-Feb	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25-Feb	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26-Feb	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27-Feb	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28-Feb	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	
29-Feb	0.00	0.00	0.30	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.34	



Maximum Hour//Monthly Total 0.30
Total Hours In Month 696
Valid Hours//Percent Data Captured 696 100.0%